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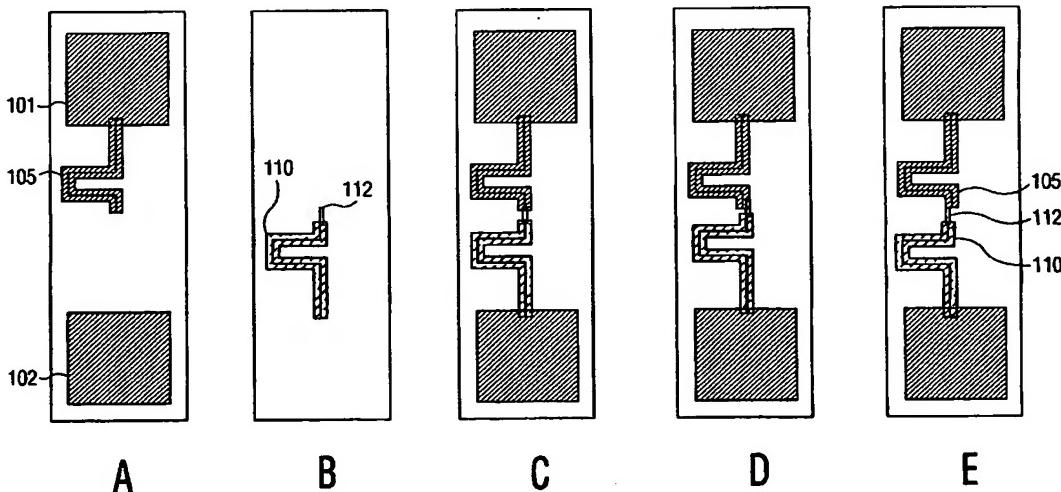
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## Declaration under Rule 4.17:

*— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,*

*[Continued on next page]*

(54) Title: RESISTOR STRUCTURES TO ELECTRICALLY MEASURE UNIDIRECTIONAL MISALIGNMENT OF STITCHED MASKS



(57) Abstract: An apparatus and method for matched variable resistor structures to electrically measure unidirectional misalignment of stitched masks for etched interconnect layers includes a first test pad (101) and a second test pad (102) for measuring resistance therebetween; a first resistive element (105) electrically connected at a first end to the first test pad (101); and, a second resistive element (110) electrically connected at a first end to the second test pad (102). The first resistive element and the second resistive element are electrically connected by a vertical offset (112). The resistance measured between the first test pad and the second test pad is variable in accordance with an alignment of the first resistive element and the second resistive element relative to the vertical offset, see Fig. 1C-E. An indicator may optionally provide an indication that the resistive elements are in alignment.

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*FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
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ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ,  
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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER			
IPC 7	G03F9/00	G03F7/20	H01L23/544 G01R31/316

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 225 013 B1 (AYELET MARGALIT ILOVICH ET AL) 1 May 2001 (2001-05-01) column 1, line 5-8 column 2, line 32-41 column 3, line 32-48 column 10, line 55 -column 11, line 12; claim 20; figures 2,3,15,16 ---	1-13
Y	US 6 393 714 B1 (LOOK KEVIN T ET AL) 28 May 2002 (2002-05-28) column 1, line 5-8 column 3, line 66 -column 5, line 3; figures 1A,1B,4B ---	1-13 -/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- \*&\* document member of the same patent family

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 571 538 A (CHOW PEI-MING D) 18 February 1986 (1986-02-18) column 1, line 8-12 column 2, line 36 -column 4, line 29; figures 1-4 -----	1-13
A	DE 38 31 086 C (TEXAS INSTRUMENTS DEUTSCHLAND GMBH) 8 February 1990 (1990-02-08) column 1, line 3-9 column 2, line 67 -column 4, line 42; figure 1 -----	1, 4-6, 9

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No  
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